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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,666	11/20/2001	Glenn G. Daves	FIS920010103US1	1815

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CANTOR COLBURN LLP  
55 GRIFFIN ROAD SOUTH  
BLOOMFIELD, CT 06002

EXAMINER

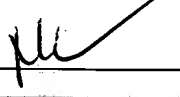
VU, HUNG K

ART UNIT PAPER NUMBER

2811

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/989,666	Applicant(s) DAVES ET AL. 	
	Examiner Hung K. Vu	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 6 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of Invention of Group I, Claims 1-14, in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant's election without traverse of Invention of Group I, Claims 1-14, in Paper No. 6 is acknowledged.

Claims 15-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 6.

### *Specification*

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Objections*

3. Claim 5 is objected to because of the following informalities: In claim 5, line 8, "grid." should be changed to "grid;" for clarity. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Corisis et al. (PN 6,072,233).

Corisis et al. discloses, as shown in Figures 1-9, a jogging structure for translating wiring connections from points in a first grid to corresponding points in a second grid in a chip carrier module, the structure comprising:

a first translation layer (30), coupled to the first grid, the first translation layer translating the first grid in an x-axis direction;

a second translation layer (30), coupled to the first translation layer, the second translation layer for translating the wiring connections from the first grid in a y-axis direction, the y-axis direction being orthogonal to the x-axis direction;

the second translation layer is further coupled to the second grid.

With regard to claims 2 and 9, Corisis et al. discloses:

the points (32,34) within the first grid have a first pitch, the first pitch being defined by a first distance between neighboring points in the first grid;

the points (32,34) with the second grid have a second pitch, the second pitch being defined by a second distance between neighboring points in the second grid;

the second pitch is not an integral multiple of the first pitch [Figures 2-9].

With regard to claims 3 and 10, Corisis et al. discloses:

the first translation layer further comprises a first plurality of signal interconnects, the first plurality of signal interconnects each having a jog line elongated along the x-axis direction

the second translation layer further comprises a second plurality of signal interconnects, the second plurality of signal interconnects each having a jog line elongated along the y-axis direction.

With regard to claims 4 and 11, Corisis et al. discloses:

each of the jog lines in the first plurality of signal interconnects is disposed between an upper via contact and a lower via contact in the first translation layer;

each of the jog lines in the second plurality of signal interconnect is disposed between an upper via contact and a lower via contact in the second translation layer.

With regard to claims 5 and 12, Corisis et al. discloses:

each individual upper via contact in the first translation layer is in electrical communication with a corresponding point in the first grid;

each individual lower via contact in the first translation layer is in electrical communication with a corresponding upper via contact in the second translation layer;

each individual lower via contact in the second translation layer is in electrical communication with a corresponding point in the second grid;

signal via in the first plurality of signal vias are in electrical contact with corresponding individual signal vias in the second plurality of signal vias.

With regard to claim 8, Corisis et al. discloses, as shown in Figures 1-9, a module for an integrated circuit (IC) chip, the module comprising:

- a first grid for receiving electrical connections from the IC chip;
- a redistribution layer (30) for fanning the electrical connections received by the first grid from the first grid to a second grid, the redistribution layer further comprising:
  - a first translation layer (30), coupled to the first grid, the first translation layer translating the first grid in an x-axis direction;
  - a second translation layer (30), coupled to the first translation layer, the second translation layer for translating the wiring connections from the first grid in a y-axis direction, the y-axis direction being orthogonal to the x-axis direction;
  - the second translation layer is further coupled to the second grid.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corisis et al. (PN 6,072,233).

Corisis et al. discloses the first grid and the second grid comprise the C4 grids. Corisis et al. does not disclose the second grid comprises a logic service terminal (LST) grid. However, Corisis et al. discloses the second grid is used as the terminal grid to connect the other modules. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the second grid of Corisis et al. to function as a logic service terminal since Corisis et al. discloses the same purpose to translate the first grid to the second grid as that claimed by Applicants. Further, claim directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does ." (emphasis in original) Hewlett - Packard Co . v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

***Allowable Subject Matter***

6. Claims 6 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance:

Applicant's claims 6 and 13 are allowable over the references of record because none of these references disclose or can be combined to yield the claimed structure or module further comprising a first plurality of power busses in the first translation layer, disposed along the x-axis direction and a second plurality of power busses in the second translation layer, disposed in the y-axis direction.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung K. Vu whose telephone number is (703) 308-4079. The examiner can normally be reached on Mon-Thurs 6:00-3:30, alternate Friday 7:00-3:30, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Vu

August 8, 2003

